



WEEKLY OVERSIGHT REPORT

CH2MHILL

Weekly Summary Report

USEPA Oversight, Sauget Area 2, Sauget, IL

WA No. 224-RXBF-05XX / Contract No. 68-W6-0025

Week Ending Friday June 4, 2004

This report summarizes the Interim Remedial Action (IRA) work conducted by Solutia and its contractors from June 1 through June 4, 2004 at Site R, Sauget Area 2. The current IRA fieldwork consists of site preparation, barrier wall trenching, and backfilling.

Contractors Onsite

Inquip Associates Inc. (barrier wall construction contractor)

PSI (geotechnical testing subcontractor)

Pangea (subcontractor to Inquip for site maintenance and preparation)

URS (primary consultant for Solutia)

Work Performed This Week

Work at the site continued with a crew of Inquip operators and laborers performing site and trench maintenance activities. Note that no work was performed on May 31 (Memorial Day).

Along the east-west leg of the trench at the southernmost section of the barrier wall, approximately 55 feet of trench were excavated during the week with either the small trackhoe or the trackhoe 1266 extending the open trench to station 5+65. Backfill was placed into the trench on one day, with the daylighted backfill closing the north end of the open trench to station 17+60.

The hydraulic clamshell rig was used to clean the trench bottom and to excavate the trench to a greater depth. The mechanical clamshell rig was not in operation during the week because there was insufficient work space for two rigs to operate in the southern portion of the barrier wall alignment.

Groundwater Migration Control System (GMCS)

The river elevations fluctuated between approximately 404.5 feet above sea level (amsl) and 407.2 feet amsl during the week. As a result of the high river stage, the combined flow rate of the extraction well system ranged from 324 gallons per minute (gpm) to 432 gpm.

The eight barrier wall piezometers, with four inside and four outside the barrier wall alignment, continued to monitor the groundwater water elevations adjacent to the barrier wall alignment. Table 1 shows the river and piezometer water elevations measured on June 4, 2004 (15:00 PM). Water levels measured inside the barrier wall alignment, with the exception of piezometer pair of P1S and P1N, were about five feet lower than those measured outside the barrier wall alignment. For the piezometer pair of P1S and P1N, water levels at P1S (inside of the barrier wall) were generally within two feet higher than those at P1N (outside of the barrier wall). Nevertheless, the river elevations were

significantly higher than those measured at all eight piezometers throughout the week, indicating an inward groundwater flow direction toward Site R.

TABLE 1
River and Piezometer Water Elevations – June 4, 2004 (15:00 PM)

	Elevation (ft above mean sea level)
River Level	407.27
Piezometer 1S – inside wall (northern-most pair)	399.31
Piezometer 1N – outside wall (northern-most pair)	397.79
Piezometer 2E – inside wall (north-central pair)	397.26
Piezometer 2W – outside wall (north-central pair)	401.97
Piezometer 3E – inside wall (south-central pair)	396.44
Piezometer 3W – outside wall (south-central pair)	401.19
Piezometer 4E – inside wall (southern-most pair)	395.42
Piezometer 4W – outside wall (southern-most pair)	399.80

Stormwater

Accumulated stormwater within the exclusion zone (resulting from rainfall during the previous week) was pumped into the north modutank. The stormwater in the north modutank was then conveyed to the south modutank and then to the American Bottoms Regional Treatment Facility (ABRTF) for further treatment.

Slurry Mixing

Approximately 46 tons of bentonite powder were used to mix fresh slurry on two days of the week. The slurry, when pumped from the south holding pond to the open trench near station 14+90, was tested frequently to assess its viscosity and adjusted with a blending pump using water from the fire hydrant, as necessary. The viscosity of the slurry was measured using a Marsh funnel, with results generally meeting the specification.

Spoils Handling

During the week, spoils were transferred from the temporary stockpile area on top of the landfill to the central portion of the exclusion zone for backfill mixing.

Barrier Wall Construction

Inquip continued excavation of the trench along the south arm of the barrier wall alignment with the hydraulic clamshell rig for both trench bottom cleaning and deeper excavation.

As of June 4, the open trench was approximately 1,195 feet in length along the barrier wall alignment from station 5+65 towards station 17+60 (please refer to Solutia's map for locations).

Fresh bentonite slurry was pumped into the open trench as needed to keep the excavation open on three days of the week. Slurry samples were collected from the top and the bottom

of the trench daily; fresh and trench slurry samples were tested for viscosity, density (unit weight), filtrate loss, pH and sand content during the week. With the exception of one viscosity result for top trench slurry, all the results either met the specifications or satisfied the quality targets. The mechanical desander was not operated this week.

During the week, Inquip mixed and placed into the trench approximately 360 cubic yards of backfill materials. Backfill operations took place on one day of the week. The backfill consists of spoils from the temporary stockpile area with the addition of approximately two percent of bentonite in dry weight.

The backfill was tested by PSI for slump, unit weight and moisture content. The unit weight of backfill placed during the week measured approximately between 123 and 126.5 pounds per cubic foot (pcf). Slump test results were generally between 4 to 4.5 inches. All test results met the minimum requirements. Tests on the backfill mixture to be conducted offsite included permeability and gradation.

The bottom of the trench at and ahead of the backfill toe was cleaned using the clamshell rig prior to the backfill placement. Depth-to-bottom measurements were made every 10 linear feet of trench to ensure the bottom of the trench was at a consistent depth and on top of bedrock. These depth measurements were performed with the clamshell rig's instrumentation and were manually confirmed at two locations with the downrigger (plumbob on wire). On a daily basis, two samples were collected by PSI with a clam sampler from the top of the placed backfill in the trench prior to backfill placement. These samples were visually checked to ensure that the backfill surface in the trench was clean and free of any sand.

During the week, the trench depths were measured each day, either in the morning or at the end of the day. The trench depth measurements were made every 100 linear feet of trench, with 20-foot spacing of measurements on either side of the backfill toe. The trench depth measurements from the morning of June 4, after backfill was placed into the trench on June 2 as well as additional excavation on June 3, are shown in Table 2. The trench profile is depicted in Graph 1 and is compared to the trench depth profile measured on May 26. Graph 2 shows the overall progress of the barrier wall construction.

Other Activities

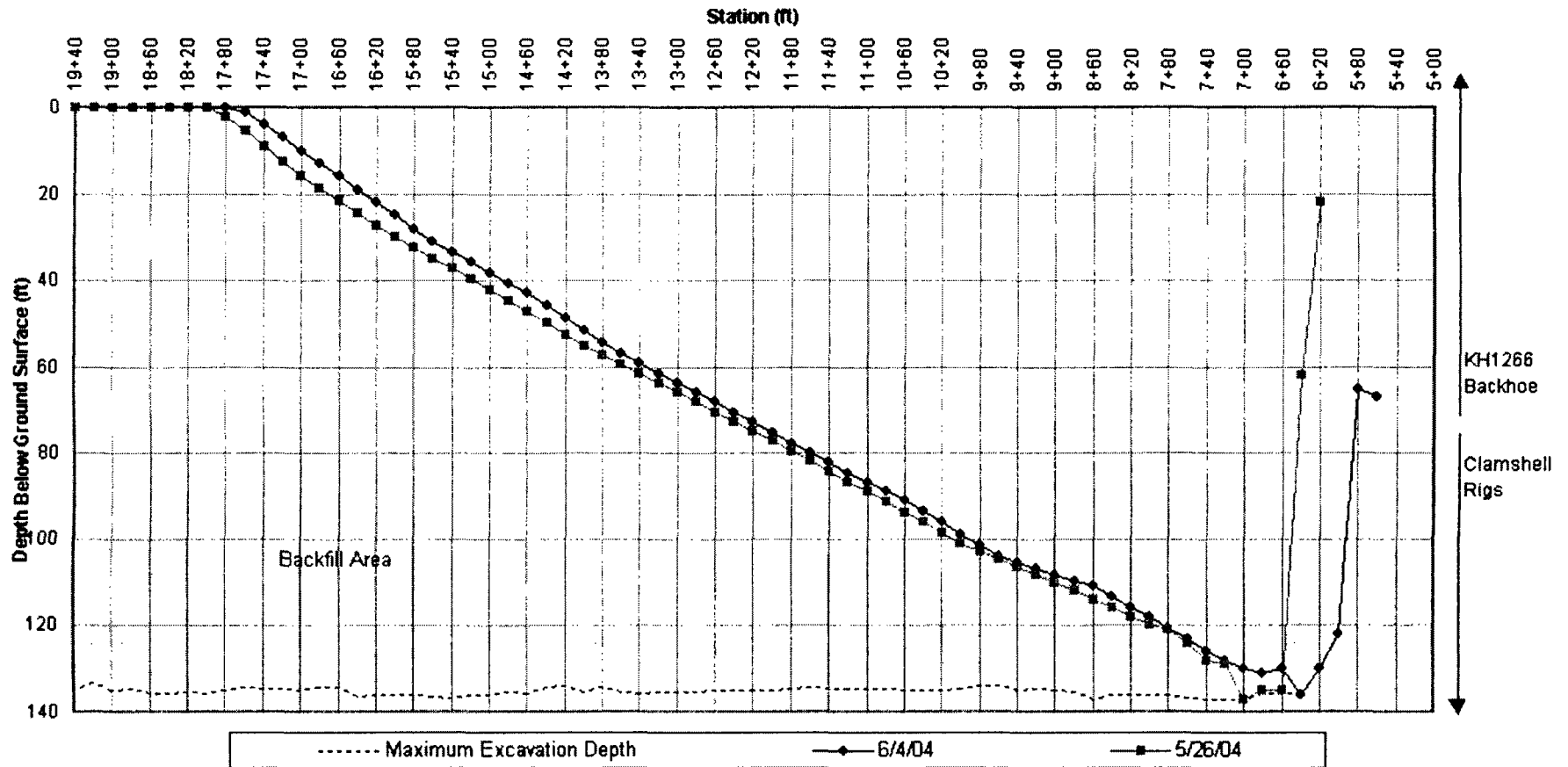
Pangea was onsite to backfill the abandoned benzene line excavation pit with more gravel to ground surface. Gravel was also used to fill up portions of the access road on top of the landfill at which water tends to accumulate during rain events. Concrete slabs, approximately 200 feet long, need to be removed along the barrier wall footprint.

Inquip continued to build the work platform near the northwest corner of the barrier wall alignment, extending along the northern leg. The work platform is constructed of gravel and finer rock aggregates and is compacted to form a base upon which the excavation equipment will operate.

TABLE 2
Trench Profile (Downrigger Measurements) for the Barrier Wall Trench – June 4, 2004 (AM)

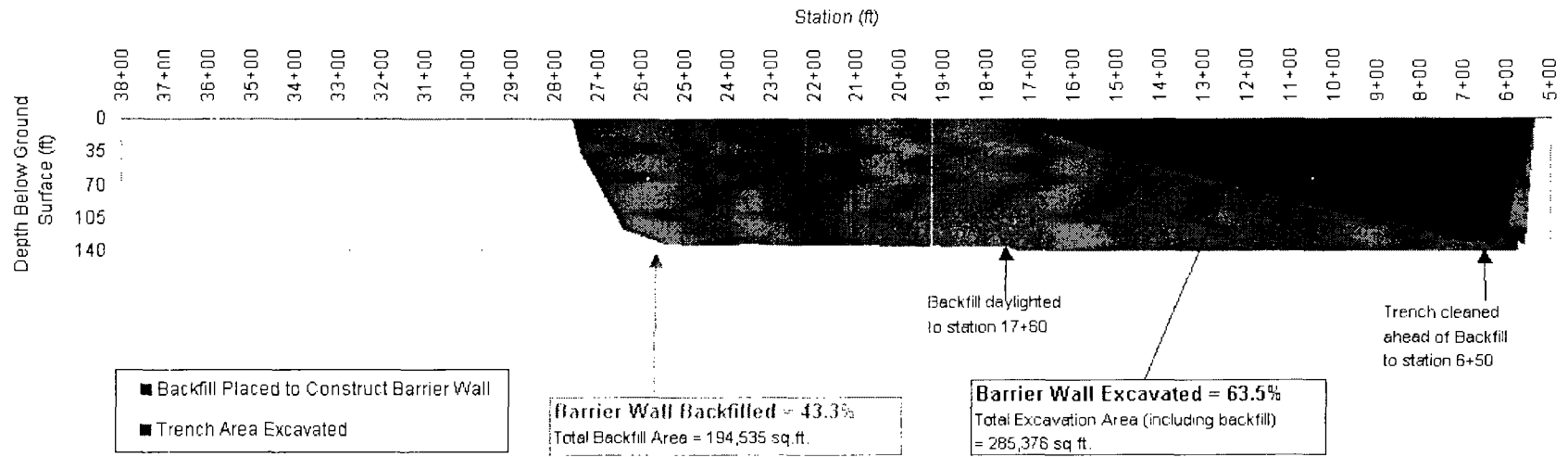
Station ID	Depth to bottom (ft below ground surface)
5+65	67
5+80	65
6+00	122
6+10	127
6+20	130
6+30	135
6+40	131
6+60	130
6+80	131
7+00	130
7+20	128
7+40	126
7+60	123
8+60	111
9+60	104
10+60	91
11+60	80
12+60	68
13+60	57
14+60	43
15+60	31
16+60	16
17+60	1

**Graph 1 - Weekly Barrier Wall Construction Progress
May 31 through June 4, 2004**



Note: Data plotted for the week through AM measurements on 5-26-04 and 6-4-04.
Some data points are interpolated between the available data points where trench depth measurements were read.

Graph 2 - Barrier Wall Construction Progress by June 4, 2004 (AM)

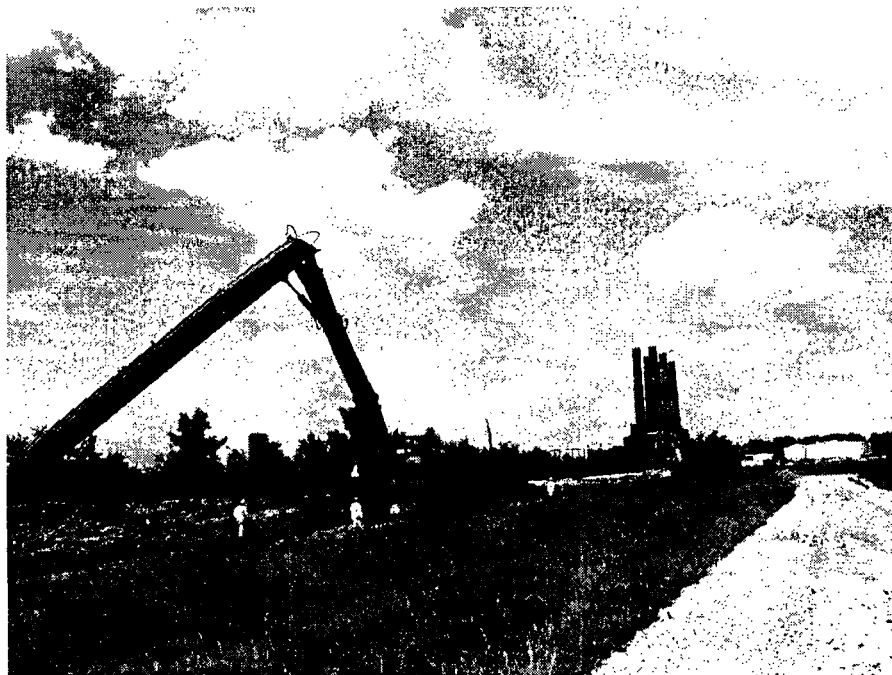


Note: Data plotted for week through AM measurements on 6-4-04.

Photos from June 1 through June 4, 2004:



The 1266 trackhoe mobilized to the access road southeast of Site R for final excavation at the south leg of barrier wall alignment (June 2, 2004).



The 1266 trackhoe mobilized toward the northwest corner of the wall alignment (June 3, 2004).